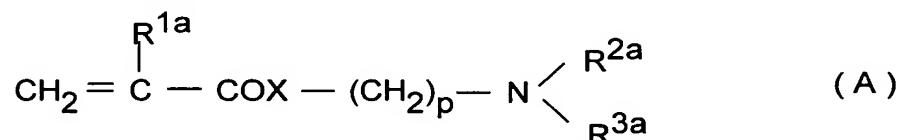


CLAIMS

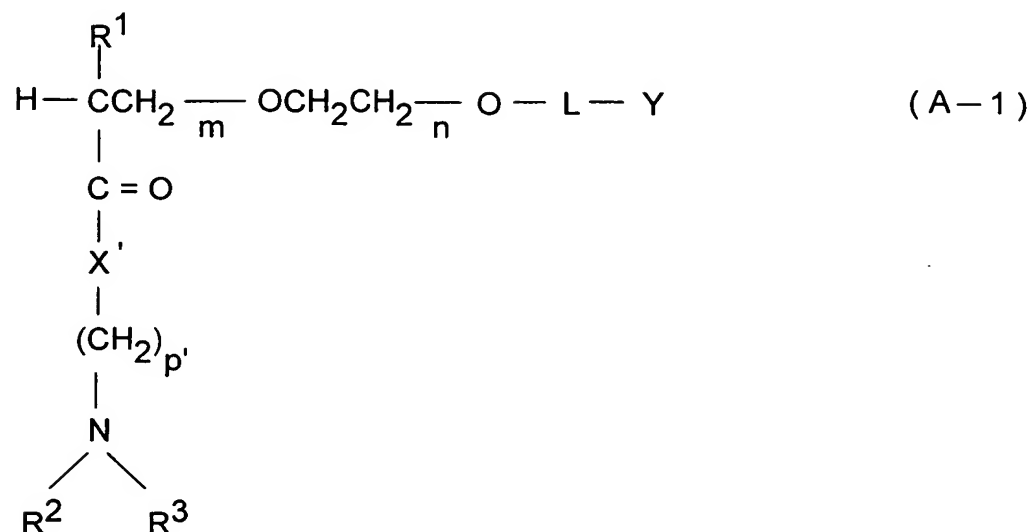
1. A finely particulate composite wherein a carbon compound of closed-shell structure which essentially consists of 30 to 2000 carbon atoms is covered with polymer chain, which is characterized in that said carbon compound is encapsulated in a structure which is originated in a block copolymer having a polymer chain segment containing a recurring unit which has, on its side chain, a tertiary amino group and/or a secondary amino group and a poly(ethyleneglycol) chain segment, and which has the former segment as a core and the latter segment as a shell.
2. A finely particulate composite of claim 1 which has a solubility of 0.5 mg/ml or more in distilled water at 25°C.
3. A finely particulate composite of claim 1 wherein the polymer chain segment containing a recurring unit which has, on its side chain, a tertiary amino group and/or a secondary amino group is originated from a monomer of general formula (A) as follows:



wherein R^{1a} denotes a hydrogen atom or a C₁₋₆ alkyl group, R^{2a} and R^{3a} either, independently, denote a C₁₋₆ alkyl group or, taken together, may form, with the nitrogen atom to which they are bound, a five- or six-membered heterocycle which may contain further one or two nitrogen atoms, an oxygen atom or a sulfur atom, X denotes -O- or -NH-, and p denotes an integer of 2 to 6, said finely particulate composite having a solubility of 0.5 mg/ml or more in distilled water at 25°C.

4. A finely particulate composite of anyone of claims 1 to 4

wherein the block copolymer has general formula (A-1) as follows:



wherein R^1 denotes a hydrogen atom or a C_{1-6} alkyl group, R^2 and R^3 either, independently, denote a C_{1-6} alkyl group or, taken together, may form, with the nitrogen atom to which they are bound, a five- or six-membered heterocycle which may contain further one or two nitrogen atoms, an oxygen atom or a sulfur atom, X' denotes $-\text{O}-$ or $-\text{NH}-$,

p' denotes an integer of 2 to 6,

L denotes a C_{1-6} alkylene or a valence bond,

Y denotes a hydrogen atom, a hydroxyl group, a carboxyl group, an amino group, an acetalized formyl group or a formyl (or aldehyde) group,

m denotes an integer of 1 to 10,000,

n denotes an integer of 10 to 20,000, and

p' denotes an integer of 2 to 6.

5. A finely particulate composite of anyone of claims 1 to 4 wherein the carbon compound is C_{30} – C_{120} fullerene which consists of carbon atoms alone.

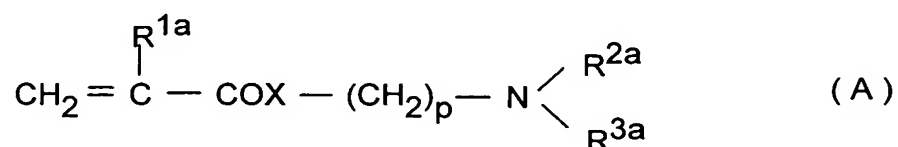
6. A process to produce a finely particulate composite of claim 1, which is characterized in that a carbon compound of closed-shell

structure which essentially consists of 30 to 2000 carbon atoms and a block copolymer having a polymer chain segment containing a recurring unit which has, on its side chain, a tertiary amino group and/or a secondary amino group and a poly(ethyleneglycol) chain segment are dissolved in a dipolar aprotic solvent and mixed, and that the resulting mixture is dialyzed against an aqueous solvent through a dialysis membrane whose molecular weight cut off is 12000 to 14000, to give a finely particulate composite wherein said carbon compound is encapsulated in a structure originated in the block copolymer.

7. An active oxygen scavenger which contains a finely particulate composite of anyone of claims 1 to 5 as an effective ingredient.
8. An active oxygen scavenger of claim 7 which is used in a field of foods, medical treatment, dermatology or cosmetics.
9. A finely particulate composite wherein a carbon compound of closed-shell structure which essentially consists of 30 to 2000 carbon atoms is covered with polymer chain, which is characterized in that said carbon compound is encapsulated in a structure which is originated in a block copolymer having a polymer chain segment containing a recurring unit which has, on its side chain, a tertiary amino group and/or a secondary amino group and a poly(ethyleneglycol) chain segment, and which has the former segment as a core and the latter segment as a shell, and that an ultrafine particle of metal either in the form of metal element or in the form of its ion is encapsulated in the closed-shell structure of said carbon compound.
10. A finely particulate composite of claim 9 wherein the metal either in the form of metal element or in the form of its ion is paramagnetic metal.

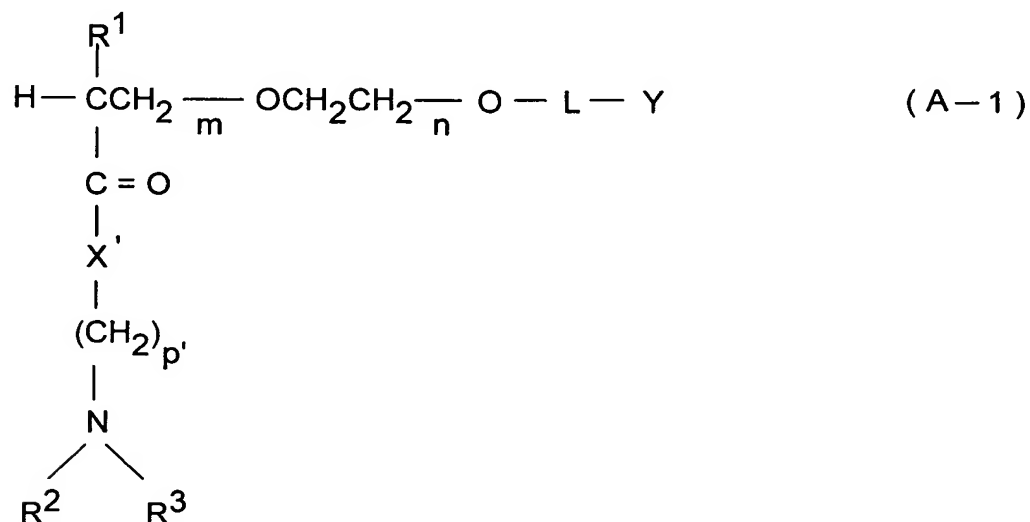
11. A finely particulate composite of claim 10 wherein the paramagnetic metal is originated in an element selected from the group consisting of gadolinium, europium, terbium and erbium.

12. A finely particulate composite of anyone of claims 9 to 11 wherein the polymer chain segment containing a recurring unit which has, on its side chain, a tertiary amino group and/or a secondary amino group is originated from a monomer of general formula (A) as follows:



wherein R^{1a} denotes a hydrogen atom or a C_{1-6} alkyl group, R^{2a} and R^{3a} either, independently, denote a C_{1-6} alkyl group or, taken together, may form, with the nitrogen atom to which they are bound, a five- or six-membered heterocycle which may contain further one or two nitrogen atoms, an oxygen atom or a sulfur atom, X denotes $-\text{O}-$ or $-\text{NH}-$, and p denotes an integer of 2 to 6.

13. A finely particulate composite of claim 12 wherein the block copolymer has general formula (A-1) as follows:



wherein R^1 denotes a hydrogen atom or a C_{1-6} alkyl group, R^2 and

R³ either, independently, denote a C₁₋₆ alkyl group or, taken together, may form, with the nitrogen atom to which they are bound, a five- or six-membered heterocycle which may contain further one or two nitrogen atoms, an oxygen atom or a sulfur atom,

X' denotes -O- or -NH-,

p' denotes an integer of 2 to 6,

L denotes a C₁₋₆ alkylene or a valence bond,

Y denotes a hydrogen atom, a hydroxyl group, a carboxyl group, an amino group, an acetalized formyl group or a formyl (or aldehyde) group,

m denotes an integer of 1 to 10,000,

n denotes an integer of 10 to 20,000, and

p' denotes an integer of 2 to 6.

14. A contrast medium which comprises a finely particulate composite of claim 11 or 12 as an effective ingredient.